Listing of Claims:

1. (Currently Amended) A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a preliminary irrigation schedule for a geographic location;

b. computing a water budget ratio by comparing current local geo-environmental data with stored local geo-environmental data **wherein said local geo-environmental data does not include evapotranspiration data**; and

c. modifying said preliminary irrigation schedule based upon said ratio.

2. (Original) The method of claim 1 wherein said local geo-environmental data comprises a table of extraterrestrial radiation (RA) values arranged by date and by approximate latitude.

3. (Original) The method of claim 2 comprising the additional step of determining the approximate latitude for the geographic location from user input.

4. (Original) The method of claim 3 wherein the computation of the water budget ratio comprises the additional steps of:

a. computing a standard temperature budget factor;

b. computing a periodic temperature budget factor; and

c. dividing said periodic temperature budget factor by said standard temperature budget factor.

5. (Original) The method of claim 4 wherein the computation of both said standard temperature budget factor and said periodic temperature budget factor utilize an extraterrestrial radiation value from said table.

6. (Currently Amended) The method of claim 5 comprising the additional steps of inputting a current date, inputting an expected maximum temperature and inputting a time frame for said **expected maximum** temperature.

7. (Original) The method of claim 6 comprising the additional step of computing the standard temperature budget factor by multiplying the expected maximum temperature by an extraterrestrial radiation value for the time frame of said expected maximum temperature.

8. (Currently amended) The method of claim 7 wherein said stored local geo-environmental data comprises ~~the~~ **an** expected ~~high~~ **maximum** temperature during the summer months.

9. (Original) The method of claim 8 wherein said current local geo-environmental data is collected over a period of twenty-four hours.

10. (Currently amended) The method of claim 6 comprising the additional steps of computing said ~~current~~ **periodic** temperature budget factor by multiplying an actual recorded maximum temperature taken over a previous predetermined **time** period and an extraterrestrial radiation value for said geographic location during said period.

11. (Original) The method of claim 1 comprising the additional step of programming said controller to water an irrigation area according to said modified irrigation schedule only upon the occurrence of a predefined environmental event.

12. (Original) The method of claim 11 wherein said predefined environmental event comprises the lack of rainfall within a predefined period of time.

13. (Original) The method of claim 11 wherein said predefined environmental event comprises a current temperature exceeding a predefined minimum irrigation temperature.

14. (Currently amended) A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a current date, an expected maximum temperature, a time frame for said **expected maximum** temperature, approximate latitudinal information, and a preliminary irrigation schedule;

b. computing a water budget ratio from current local geo-environmental data and stored local geo-environmental data comprising the steps of:

1. computing a standard temperature budget factor from said stored local geo-environmental data by multiplying the expected maximum temperature by an extraterrestrial radiation value for the time frame of said expected maximum temperature at a latitude determined from said approximate latitudinal information,

2. computing a periodic temperature budget factor by multiplying an actual recorded maximum temperature taken over a previous predetermined **time** period by an extraterrestrial radiation value at said determined latitude during said ~~particular~~ **predetermined** period, and

3. computing said water budget ratio by dividing said periodic temperature budget factor by said standard temperature budget factor; and

c. modifying said preliminary irrigation schedule based upon said ratio.

15. (Original) The method of claim 14 wherein said modification of said preliminary irrigation schedule comprises multiplying said preliminary irrigation schedule by said water budget ratio.

16. (Currently amended) The method of claim 14 comprising the additional step of programming said controller to water an irrigation area according to said **modification of said preliminary** ~~modified~~ irrigation schedule only upon the occurrence of a predefined environmental event.

17. (Original) The method of claim 16 wherein said predefined environmental event comprises the lack of rainfall within a predefined period of time.

18. (Original) The method of claim 16 wherein said predefined environmental event comprises a current temperature exceeding a predefined minimum irrigation temperature.

19. (Currently Amended) An apparatus for automatically adjusting irrigation watering schedules, comprising:

a. an input device;

b. a microprocessor;

c. at least one data storage device having instructions for computing a water budget ratio using current local geo-environmental data and stored local geo-

environmental data **wherein said local geo-environmental data does not include evapotranspiration data**;

d. at least one temperature sensor;

e. a power source; and

f. at least one irrigation water output cutoff switch.

20. (Original) The apparatus of claim 19 wherein said input device is remotely programmable.

21. (Original) The apparatus of claim 19 wherein said data storage device comprises a table of extraterrestrial radiation values arranged by date and by approximate latitude.

22. (Currently Amended) The apparatus of claim 19 wherein said instructions for computing a water budget ratio comprise dividing a periodic temperature budget factor by a standard temperature budget factor, wherein said microprocessor computes said periodic temperature budget factor by multiplying an actual recorded maximum temperature taken by said **at least one** temperature sensor over a previous predetermined **time** period and an extraterrestrial radiation value at a user-input approximate latitude during said ~~particular~~ **predetermined** period, and wherein said microprocessor computes said standard temperature budget factor by multiplying an expected maximum temperature entered by an operator by an

extraterrestrial radiation value for a user-input time frame of said expected maximum temperature at said approximate latitude.

23. (Original) The apparatus of claim 19 further comprising at least one environmental sensor.

24. (Currently amended) The apparatus of claim 23 wherein said **at least one** environmental sensor is a precipitation sensor.

25. (Original) The apparatus of claim 19 wherein said power source comprises at least one battery.

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26. **(New)** The apparatus of claim 19 wherein said at least one temperature sensor is wirelessly connected to said microprocessor.

27. **(New)** A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a preliminary irrigation schedule for a geographic location;

b. determining an approximate latitude for the geographic location;

c. computing a water budget ratio using values in a table of current local geo-environmental data and values in a table of stored local geo-environmental data, said local geo-environmental data comprising extraterrestrial radiation (RA) values arranged by date and by approximate latitude, by

1. computing a standard temperature budget factor;

2. computing a periodic temperature budget factor; and

3. dividing said periodic temperature budget factor by said standard temperature budget factor; and

d. modifying said preliminary irrigation schedule based upon said ratio.

28. **(New)** A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a preliminary irrigation schedule for a geographic location and approximate latitudinal information for the geographic location;

b. computing a water budget ratio using values in a table of current local geo-environmental data and values in a table of stored local geo-environmental data, said local geo-environmental data comprising extraterrestrial radiation (RA) values arranged by date and by approximate latitude, by

1. computing a standard temperature budget factor;

2. computing a periodic temperature budget factor; and

3. dividing said periodic temperature budget factor by said standard temperature budget factor; and

c. modifying said preliminary irrigation schedule based upon said ratio.

29. **(New)** A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a preliminary irrigation schedule for a geographic location;

b. computing a water budget ratio using current local geo-environmental data and stored local geo-environmental data by

1. computing a standard temperature budget factor;

2. computing a periodic temperature budget factor; and

3. dividing said periodic temperature budget factor by said standard temperature budget factor; and

c. modifying said preliminary irrigation schedule based upon said ratio.

30. **(New)** The method of claim 29 comprising the additional step of determining an approximate latitude for the geographic location.

31. **(New)** The method of claim 29 wherein said local geo-environmental data comprises extraterrestrial radiation (RA) values arranged by date and by approximate latitude.

32. **(New)** A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a preliminary irrigation schedule for a geographic location;

b. computing a water budget ratio by

1. computing a standard temperature budget factor by multiplying an expected maximum temperature for a time frame by an extraterrestrial radiation value for said geographic location;

2. computing a periodic temperature budget factor by multiplying an actual recorded maximum temperature taken over a previous predetermined time period by an extraterrestrial radiation value for said geographic location during said predetermined period; and

3. dividing said periodic temperature budget factor by said standard temperature budget factor; and

c. modifying said preliminary irrigation schedule based upon said ratio.

33. **(New)** The method of claim 32 comprising the additional step of determining an approximate latitude for the geographic location.

34. **(New)** An apparatus for automatically adjusting irrigation watering schedules, comprising:

a. an input device;

b. a microprocessor having instructions for computing a water budget ratio;

c. at least one data storage device;

d. at least one temperature sensor;

e. a power source; and

f. at least one irrigation water output cutoff switch,

wherein said instructions comprise dividing a periodic temperature budget factor by a standard temperature budget factor.

35. **(New)** The apparatus of claim 34 wherein said microprocessor computes said periodic temperature budget factor by multiplying an actual recorded maximum temperature taken by said at least one temperature sensor over a previous predetermined time period by an extraterrestrial radiation value stored in said data storage device

36. **(New)** The apparatus of claim 34 wherein said microprocessor computes said standard temperature budget factor by multiplying an expected maximum temperature entered by an operator by an extraterrestrial radiation value stored in said data storage device.

37. **(New)** The apparatus of claim 35 wherein the approximate latitudinal location of said apparatus is determined, and the extraterrestrial radiation value used to compute said periodic temperature budget factor is the value for said location during said predetermined time period.

38. **(New)** The apparatus of claim 36 wherein the approximate latitudinal location of said apparatus is determined, and the extraterrestrial radiation value used to compute said standard temperature budget factor is the value for said location of a user-input time frame for said expected maximum temperature.

39. **(New)** The apparatus of claim 34 wherein said at least one temperature sensor is wirelessly connected to said microprocessor.

40. **(New)** An apparatus for automatically adjusting irrigation watering schedules, comprising:

a. an input device;

b. at least one data storage device for storing local geo-environmental data;

c. a microprocessor having instructions for computing a water budget ratio using current local geo-environmental data and said stored local geo-environmental data and wherein said instructions comprise dividing a periodic temperature budget factor by a standard temperature budget factor to compute said ratio;

d. at least one temperature sensor;

e. a power source; and

f. at least one irrigation water output cutoff switch.

41. **(New)** The apparatus of claim 40 wherein said at least one temperature sensor is wirelessly connected to said microprocessor.

42. **(New)** A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with a current date, an expected maximum temperature, a time frame for said expected maximum temperature, approximate latitudinal information, and a preliminary irrigation schedule;

b. computing a water budget ratio by

1. computing a standard temperature budget factor by multiplying the expected maximum temperature by an extraterrestrial radiation value for the time frame of said expected maximum temperature at a latitude determined from said approximate

latitudinal information,

2. computing a periodic temperature budget factor by multiplying an actual recorded maximum temperature taken over a previous predetermined time period by an extraterrestrial radiation value at said determined latitude during said predetermined period, and

3. dividing said periodic temperature budget factor by said standard temperature budget factor; and

c. modifying said preliminary irrigation schedule based upon said ratio.

43. **(New)** An irrigation controller, comprising:

a. a memory for storing extraterrestrial radiation information arranged by date for an approximate latitude;

b. at least one temperature sensor; and

c. a processing unit connected to the memory and receptive of data from the temperature sensor, the processing unit operable to execute an irrigation application program which:

1. calculates a standard temperature budget factor;

2. calculates a periodic temperature budget factor;

3. divides said periodic temperature budget factor by said standard temperature budget factor to arrive at a ratio; and

4. implements a watering program based on said ratio.

44. **(New)** The apparatus of claim 43 wherein said at least one temperature sensor is wirelessly connected to said microprocessor.

45. **(New)** The controller of claim 43 wherein said standard temperature budget factor is calculated by multiplying an expected maximum temperature for a time frame by an extraterrestrial radiation value for said latitude.

46. **(New)** The controller of claim 43 wherein said periodic temperature budget factor is calculated by multiplying an actual recorded maximum temperature taken over a previous predetermined time period by an extraterrestrial radiation value for said latitude during said predetermined period.

47 **(New)** A method for controlling irrigation, comprising the steps of:

a. measuring temperature data at a certain site;

b. calculating a water budget ratio from the measured temperature data and from stored extraterrestrial radiation data relating to the site by

1. computing a standard temperature budget factor;

2. computing a periodic temperature budget factor; and

3. dividing said periodic temperature budget factor by said standard temperature budget factor;

and

c. determining a watering program for the site based upon said ratio.

48. **(New)** A method for automatically operating an irrigation controller comprising the steps of:

a. providing said controller with an preliminary irrigation schedule;

b. entering the local latitude and expected summer high temperature;

c. computing a water budget ratio by comparing a current high temperature with said expected summer high temperature; and

d. modifying said preliminary irrigation schedule based upon said ratio.

49. **(New)** An apparatus for automatically adjusting irrigation watering schedules, comprising:

a. an input device;

b. a microprocessor having instructions for computing a water budget ratio using current local geo-environmental data and stored local geo-environmental data;

c. at least one data storage device;

d. at least one temperature sensor;

e. a power source; and

f. at least one irrigation water output cutoff switch

wherein said instructions for computing a water budget ratio comprise dividing a periodic temperature budget factor by a standard temperature budget factor, wherein said microprocessor computes said periodic temperature budget factor by multiplying an actual recorded maximum temperature taken by said at least one temperature sensor over a previous predetermined time period and an extraterrestrial radiation value at a user-input approximate latitude during said predetermined period, and wherein said microprocessor computes said standard temperature budget factor by multiplying an expected maximum temperature entered by an operator by an extraterrestrial radiation value for a user-input time frame of said expected maximum temperature at said approximate latitude.

50. **(New)** The apparatus of claim 49 wherein said at least one temperature sensor is wirelessly connected to said microprocessor.